查询ST7291L供应商

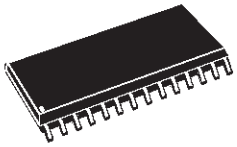
SGS-THOMSON MICROELECTRONICS

ST7291L

8-BIT MCU WITH 8/12/16/24/32K ROM, TIMER, SUPPLY SUPERVISOR AND CARRIER FREQUENCY GENERATOR

BRIEF DATA

- 2 to 5.5V Supply Operating Range
- 8MHz Maximum Clock Frequency
- Fully Static Operation
- 0 to +70°C Operating Temperature Range
- Run, Wait, Stop and RAM Retention modes
- User ROM: 12/16/24/32 Kbytes
- Data RAM: 256/384 bytes
- 28 pin SO Plastic Packages
- 21 Bidirectional I/O lines
- 8 standard Push-pull I/Os with wake-up feature 13 standard Push-pull I/Os
- 16-bit Timer with Output Compare (no output pin)
- Low Voltage Detector (LVD)
- Interrupt Wake-up function
- IR Carrier Frequency Generator
- 8-bit Data Manipulation
- 63 Basic Instructions
- 17 main Addressing Modes
- 8x8 Unsigned Multiply instruction
- True Bit Manipulation
- Complete Development Support on PC/DOS/ Windows 3.1x/95/NT with Real-Time Emulator
- Full Software Package (Cross-Assembler, Debugger)
- Full Hardware Emulator
- EPROM and OTP support



PSO28

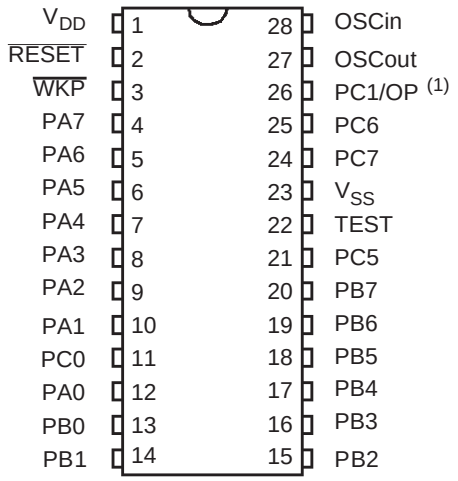
(See end of Datasheet for Ordering Information)

Note 1. This device is in development, consult your SGS-THOMSON representative for the current status.

DEVICE SUMMARY

DEVICE	ROM (Bytes)	RAM (Bytes)	CARRIER GENERATOR
ST7291L6 (1)	32K	384	Yes
ST7291L5	24K	384	Yes
ST7291L5A	16K	384	Yes
ST7291L4	16K	256	No
ST7291L3	12K	256	No
ST7291L2	8K	256	No

Figure 1. Pin Description



Notes:
1. PC1 on ST7291L2/L3/L4; software selectable as OP on ST7291L6/L5/L5A

This is preliminary information on a new product in development or undergoing evaluation. Details are subject to change without notice.

1 GENERAL DESCRIPTION

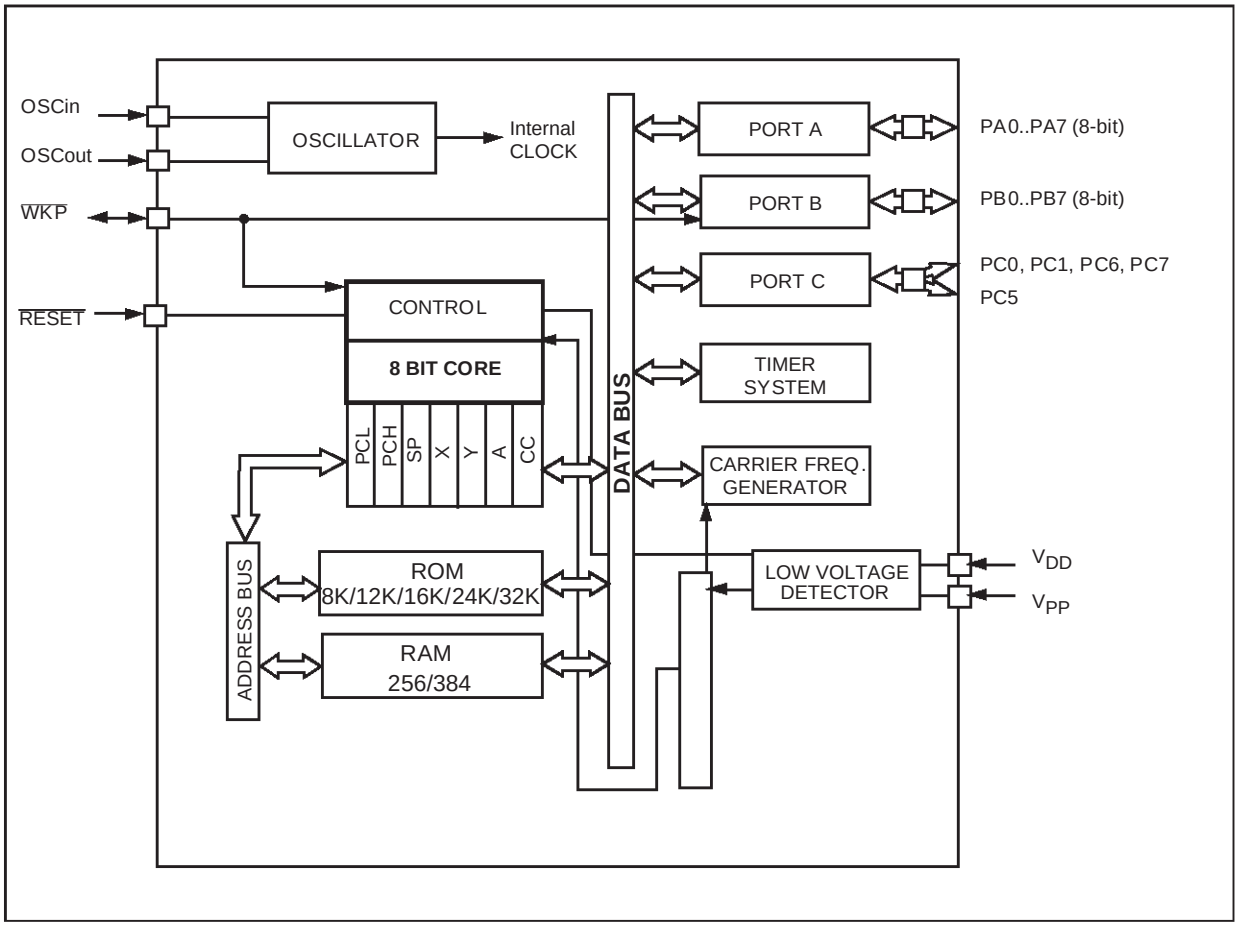
1.1 INTRODUCTION

The ST7291L CMOS Microcontroller Unit is a member of the ST7 family of microcontrollers. The device is based on an industry-standard 8-bit core and features an enhanced instruction set. Oscillator frequency may be as high as 8MHz, however, thanks to the fully static design, operation is possible down to DC. Under software control, the ST7291L may be placed in either WAIT or HALT modes, thus reducing power consumption.

The enhanced instruction set and addressing modes afford real programming potential. In addition to standard 8-bit data management, the ST7291L features bit manipulation, 8x8 unsigned multiplication and indirect addressing modes.

The device includes a CPU, ROM, RAM, I/O, an on-chip oscillator, a timer with output compare system and, depending on the version, a Low Voltage Detection (LVD) and Carrier Frequency generation for remote control applications.

Figure 2. ST7291L Block Diagram

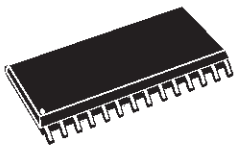


SGS-THOMSON MICROELECTRONICS

ST72E91L
ST72T91L

8-BIT MCU WITH 32K EPROM/OTP, TIMER, SUPPLY SUPERVISOR AND CARRIER FREQUENCY GENERATOR

- 3 to 5.5V Supply Operating Range
- 8MHz Maximum Clock Frequency
- Fully Static operation
- 0 to +70°C Operating Temperature Range (OTP)
- Run, Wait, Stop and RAM Retention modes
- User EPROM/OTP: 32 Kbytes
- Data RAM: /384 Bytes
- 28 pin SO plastic packages for ST72T91 OTP version
- 28 pin Ceramic SO package for ST72E91 EPROM version
- 21 Bidirectional I/O lines
- 8 Interrupt Wake-Up programmable input lines
- 16-bit Timer with Output Compare (no output pin).
- Interrupt Wake-up function
- Low Voltage Detector (LVD)
- IR Carrier Frequency Generator
- 8-bit Data Manipulation
- 63 Basic Instructions
- 17 main Addressing Modes
- 8x8 Unsigned Multiply instruction
- True Bit Manipulation
- Complete Development Support on PC/DOS/ Windows 3.1x/95/NT with Real-Time Emulator
- Full Software Package (Cross-Assembler, Debugger)
- Full Hardware Emulator



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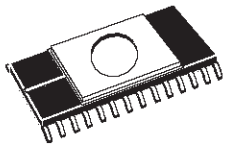
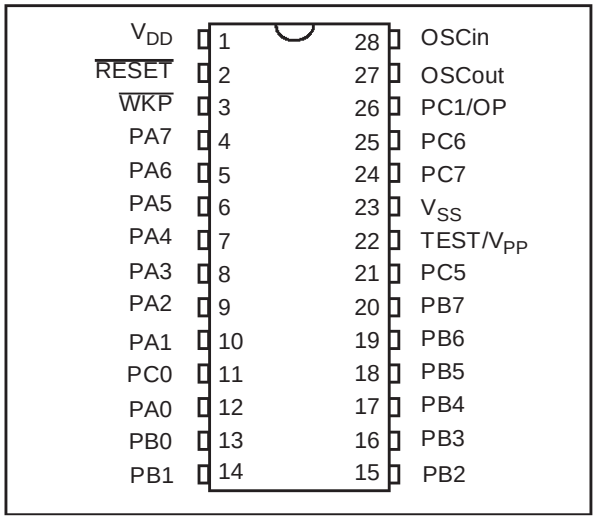


CSO28W

(See end of Datasheet for Ordering Information)

Figure 1. Pin Description



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1 GENERAL DESCRIPTION

1.1 INTRODUCTION

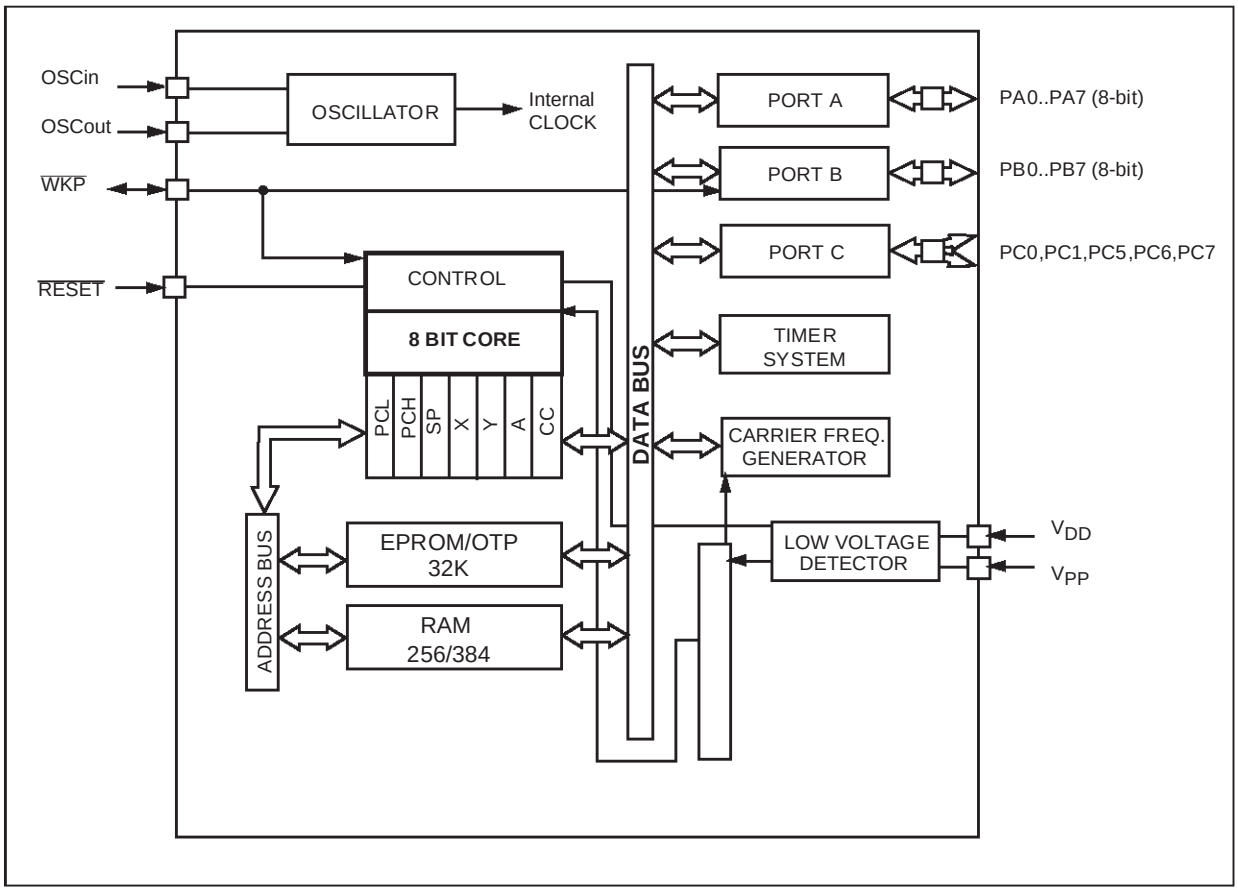
The ST72E91 and ST72T91 devices form part of the ST7 family of Microcontrollers, designed and produced by SGS-THOMSON Microelectronics using an n-well proprietary HCMOS process. The ST72E91 is equipped with internal EPROM memory and is available in windowed ceramic package, whereas the ST72T91 OTP version is available in a plastic package. The EPROM parts are fully compatible with their ROM versions and the present Datasheet will thus provide only information specifically relating to the EPROM devices.

PLEASE REFER TO THE ST7291 DATASHEET FOR THE ROM DEVICES FOR FULL DETAILS

The ST72E91 is a user programmable and erasable device, best suited for development purposes. The ST72T91 is a One-Time Programmable device (OTP) which offers the best cost/flexibility trade-off for prototyping, pre-production and most low to medium volume applications.

Both devices are based around an industry standard 8-bit core and offer an enhanced instruction set. The processors will run at an 8MHz clock rate with a 5V supply, and at up to 4MHz with a 3V supply. Since the design is fully static, operation down to DC is possible and the devices may be placed in HALT or WAIT modes under program control in order to reduce power requirements. The powerful enhanced instruction set and addressing modes afford real programming potential. In addition to standard 8-bit data management, the ST72E91 and the ST72T91 feature true bit manipulation, 8x8 unsigned multiplication and indirect addressing modes. The devices include a CPU, an on-chip oscillator, EPROM, RAM, I/O, and a timer with output compare system.

Figure 2. ST72E91 Block Diagram



Notes:

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